



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/813,883	03/22/2001	Shinji Imai	Q61202	4265

7590 08/26/2003
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3202

EXAMINER

STRECKER, GERARD R

ART UNIT	PAPER NUMBER
----------	--------------

2862

DATE MAILED: 08/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,883

Applicant(s)

Imai

Examiner

Gerard Strecker

Art Unit

2862



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above, claim(s) 1-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/22/01 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2862

Applicant's election without traverse of the invention of Group II (claims 18-52) in Paper No. 7 is acknowledged.

Claims 1-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 7.

The non-patent documents listed on Form PTO-1449 of applicant's IDS filed 3/22/01 have been relisted on the accompanying Form PTO-892, including a more complete identification of the documents. In addition, lines have been drawn through three of the documents listed on Form PTO-1449 of applicant's IDS filed 8/9/02, to avoid double printing, since these documents were previously listed with the IDS filed 3/22/01.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2862

Claims 18-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kempter (4,535,468, cited in applicant's IDS) in view of Badesha et al (4,842,973) and Polischuk et al (US 6,171,643).

Kempter discloses (the Figure) an image recording medium comprising a first electrode layer 9 permeable to a reading electromagnetic wave 18, a reading photoconductive layer 8, a charge transfer layer 7 (the interface of which, with recording photoconductive layer 6, would constitute a charge accumulating portion), a recording layer 6 and a second electrode layer 5 permeable to a recording electromagnetic wave 2. The layers are superposed in the order recited in the claims. Although Kempter does not disclose a support for the medium, adjacent the first electrode layer, inclusion of such support, if not implicit, would have been obvious to one skilled in the art, to provide a base for creation and deposit of the layers in the process of manufacturing the medium. Note at col. 5, lines 14-17, Kempter refers to applying the layers on a support. At least one of the photoconductive layers is formed of a material containing a-Se (amorphous selenium) as a major component (col. 2, lines 24-33, col. 5, lines 21, 22 and 67). The a-Se is admixed with As (col. 2, lines 29-31 and col. 6, lines 13-15) to stabilize the amorphous phase of the selenium.

Badesha et al discloses a process for depositing a selenium alloy layer onto a substrate for electrophotographic imaging members and provides an extensive discussion of the prior art electrophotographic imaging technology. In the course of such discussion Badesha et al reveals that multilayer electrographic imaging members have been improved based on amorphous

Art Unit: 2862

selenium alloys, including arsenic, (col. 1, lines 26-30) and that one of the reasons arsenic is incorporated is to protect against crystallization (col. 1, lines 45-48, col. 3, lines 20-24). In addition to arsenic in various percentages, it is also recognized in Badesha et al, that the selenium alloys may also contain proportions of halogens such as chlorine (C1), as noted, for example, at col. 2, line 67- col. 3, line 1; col. 5, lines 25-30; col. 7, lines 6-15; col. 10, lines 20-42.

Polischuk et al discloses a method of providing a multilayer plate for x-ray imaging devices. Polischuk et al also discloses that multilayer imaging devices may include a layer consisting of a halogen doped selenium arsenic alloy. See col. 1, lines 1-41. The layer provides a hole trapping function. The invention of Polishuk et al includes a photoconductive layer of amorphous selenium doped with arsenic and chlorine (col. 7, lines 10-13) and includes an arsenic-selenium based buffer layer 20 for reducing interfacial crystallization (col. 8, lines 50-62 and col. 9, line 58- col. 10, line 7) and an alkali doped selenium layer for hole trapping purposes (col. 8, line 63- col. 9, line 5). The alkali may be sodium (col. 13, line 24- col. 14, line 2).

With respect to independent claims 18, 26 and 35 and it would have been obvious to one skilled in the art, at the time of the invention, to provide the image recording medium of Kempter, with an interfacial crystallization suppressing material including arsenic, chlorine and sodium doped materials, as taught by Badesha et al and Polischuk et al, to protect against the harmful effects of interfacial crystallization. Such material could be incorporated in Kempter by way of an interfacial crystallization suppressing layer (claims 18 and 35), as taught by Polischuk et al, or, by doping (claims 26 and 35) the reading photoconductive layer, as carried out through admixing, by

Art Unit: 2862


Kempter. With respect to the dependent claims, the specific recited thicknesses of the respective crystallization suppressing layer and reading layer, the relative doping amounts of the Cl, Na and As constituents, and the use of an organic polymer film structure (claims 23-25 and 44-45) for the crystallization suppressing layer are features which would fall well within the design criteria expectations of one of ordinary skill in the art. In addition, the use of stripe configured electrodes (claims 21, 49, 51, 52) and ITO film electrodes (claims 22 and 34) in image recording medium are well recognized techniques in the art, as indicated in applicant's description of the prior art.

Imai (6,268,614) and Imai (6,552,356), prior image recording related patents by the present inventor, are made of record.

Any inquiry concerning this communication should be directed to G. R. Strecker at telephone number 305-4937.

Strecker/ek

08/12/03


GERARD R. STRECKER
PRIMARY EXAMINER